

### REMARKS

Prior to addressing the Examiner's rejections, we feel it may be useful to summarize the relevant prosecution to date:

A first Official Action was mailed July 17, 2007, rejecting the claims under §§101 and 103 and objecting to the drawings. In response, Applicant filed Amendment A, amending specification and drawings as well as independent claims 1, 8, and 15. The preambles of the claims were amended to overcome the §101 rejection. The Applicant also filed a declaration under 37 C.F.R. §1.131, thereby removing one of the primary references cited by the Examiner.

A second Official Action was mailed January 9, 2008. This non-final Office Action rejected claims 8-14 under §101 and all claims under §103. In response, the Applicant amended claims 8-14 to overcome the §101 rejection. The deficiencies of the primary prior art references (Garza and Kamon) with regard to the claims was briefly discussed.

A Final Action was mailed on July 31, 2008 in which the 101 rejection was dropped, but the art rejections of the previous Official Action dated January 9, 2008 were maintained. Applicant requested a telephone interview with the Examiner. Thereafter, the Examiner supplied an Interview Summary that correctly determined that no agreement on a claim limitation was made and further identified the claim limitation that had been discussed as "*wherein a test standard for a first area among said areas and a test standard for a second area among said areas are different from each other.*" The Examiner further reiterated the division of the prior art into separate regions. However, as the Applicant's "Amendment C under Rule 116, Request for Reconsideration and Telephone Interview Summary" pointed out, the Examiner's point regarding the separation of the prior art mask layer into separate regions was not the deficient aspect of the prior art. Rather, the substance of the telephonic interview

HAYES SOLOWAY P.C.  
3450 E. SUNRISE DRIVE,  
SUITE 140  
TUCSON, AZ 85718  
TEL. 520.882.7623  
FAX. 520.882.7643

175 CANAL STREET  
MANCHESTER, NH 03101  
TEL. 603.668.1400  
FAX. 603.668.8567

was the recognition that none of the prior art cited discussed different test standards applied to respective areas of the mask layer.

The Examiner issued an Advisory Action on November 6, 2008, in which the Examiner continued to maintain the obviousness rejection over the combination of the primary references Garza and Kamon. Once again, the Examiner dismissed Applicant's arguments, necessitating the preparation and submission of an Appeal Brief, in which Applicant pointed out that Garza and Kamon not only failed to teach the application of different test standards to different areas, but also failed to teach that the mask layer is divided into "*a plurality of areas in accordance with a second pattern to be formed on another mask layer.*"

Rather than preparing a reply brief, the Examiner conducted a further prior art search, and re-opened reexamination, providing new grounds of rejection set forth in the present office action. The new grounds of rejection are in error.

Considering first the Examiner's rejection of claims 1-7, 15-22, 25, and 26 under 35 U.S.C. §101 as not falling within one of the four statutory categories of invention. The Examiner cites the recent case *In re Bilski*, in which the Federal Circuit stated that a "process" under §101 must either be tied to a particular machine or apparatus or transform a particular article to a different state or thing. 545 F.3d 943, 954 (Fed. Cir. 2008) (*en banc*). The Examiner continues to cite the case law relevant to this principle, but misapplies the law in regards to the claims. Specifically, the Examiner characterizes the method steps of applying, dividing, determining, simulating, and checking, etc. as having sufficient breadth that they might be interpreted as a series of mental steps that might be performed without a machine. In doing so and rejecting the several claims, the Examiner ignores the tying of the method to a particular

**HAYES SOLOWAY P.C.**  
3450 E. SUNRISE DRIVE,  
SUITE 140  
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apparatus in the claims; namely, a mask (independent claim 15) or mask pattern (independent claim 1). The Examiner therefore ignores the test of *Bilski*:

“[T]he proper inquiry under §101 is not whether the process claim recites sufficient “physical steps,” but rather whether the claim meets the machine-*or*-transformation test. As a result, . . . a claim that purportedly lacks any “physical steps” but is still tied to a machine or achieves an eligible transformation passes muster under § 101.” *Id.* at 961 (emphasis added).

Moreover, the characterization of the method steps cited by the Examiner (applying, dividing, etc.) as having sufficient breadth to be regarded as mental steps not performed on the apparatus ignores the language of the claims as a whole. For example, claim 1 requires the step of “applying optical proximity-effect compensation to a first pattern to be tested and to be formed onto a mask layer, **to thereby actually form a mask pattern of said mask layer. . .**” When read in view of the claim as a whole, this step is *clearly* not extra-solution activity that may be disregarded in determining whether or not the claim meets the statutory requirements of claim 1. Independent claim 15 includes an identical limitation. Thus, the rejection of claims 1-7, 15-22, 25, and 26 for not falling within statutory subject matter is improper and should be withdrawn.

Turning to the rejection of claims 1, 4, 5, 8, 11, 12, 15, 18, 19, and 21-26 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,174,633 to Tounai (hereinafter “Tounai”)<sup>1</sup>, independent claims 1 and 8, on which claims 4, 5, 11, 12, and 21-24 depend, are directed to a **method of testing a mask pattern**. Likewise, claim 15, on which claims 25 and 26 depend, requires **using a test standard** to check whether a dimensional gap exists at each of several sampling points. The Examiner erroneously interprets Tounai as disclosing a method of testing a mask pattern. In fact, Tounai neither discloses nor teaches anything that would be

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<sup>1</sup> With respect to claim 15 (page 9 of the Office Action), the Examiner mistakenly refers to the Garza reference. We assume the Examiner intended to reject claim 15 as anticipated by Tounai and will provide comments on this basis.

viewed by one having ordinary skill in the art as a test standard.<sup>2</sup> Instead, Tounai attempts to overcome Optical Proximity Effect (photo-contiguous effect) by manufacturing a semiconductor mask in several steps, thereby minimizing the Optical Proximity Effect. No test is ever applied to any of the regions created in Tounai. This precludes the Examiner's manufactured conclusion that different test standards are applied to different regions. Thus, Tounai cannot achieve or render obvious any of claims 1, 8 and 15 nor any claims that depend thereon.

Turning to the Examiner's rejection of claims 2, 3, 9, 10, 16, 17 under 35 U.S.C. §103(a) as being unpatentable over Tounai in view of U.S. Patent No. 5,991,006 to Tsudaka (hereinafter "Tsudaka"), the rejected claims each depend on one of independent claims 1, 8, and 15. The deficiencies of Tounai vis-à-vis claims 1, 8, and 15 are discussed above. Even assuming *arguendo* that Tsudaka teaches Nth sampling points located in a Nth area, Tsudaka does not overcome these deficiencies. Thus each of claims 2, 3, 9, 10, 16, and 17 are allowable over the art as being dependent upon an allowable independent claims, as well as for their own limitations.

Finally, the Examiner's rejection of claims 6, 7, 13, 14, and 20 under 35 U.S.C. §103(a) as being unpatentable over Tounai in view of U.S. Patent No. 6,665,858 to Miyazaki (hereinafter "Miyazaki") is improper. As above, these claims each depend on one of independent claims 1, 8, or 15. As with Tsudaka, even assuming *arguendo* that the Examiner is correct in his interpretation of Miyazaki, Miyazaki does not overcome the deficiencies of Tounai. Thus each of claims 6, 7, 13, 14, and 20 are allowable over the art as being dependent upon an allowable independent claims, as well as for their own limitations.

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<sup>2</sup> Neither the word "test", nor any of several synonyms of the word "test" are found in Tounai. The synonyms searched for include: check, criteria, criterion, analysis, analyze, valid, validate, and proof.

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3450 E. SUNRISE DRIVE,  
SUITE 140  
TUCSON, AZ 85718  
TEL. 520.882.7623  
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TEL. 603.668.1400  
FAX. 603.668.8567

Having dealt with all the objections raised by the Examiner, the Application is believed to be in order for allowance. Early and favorable action is respectfully requested.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391.

Respectfully submitted,



Norman P. Soloway  
Attorney for Applicant  
Reg. No. 24,315  
Customer No. 27,667

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I hereby certify that this correspondence is being deposited with the United States Patent Office via the electronic filing procedure on November 30, 2009.



By: SLSB

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**HAYES SOLOWAY P.C.**  
3450 E. SUNRISE DRIVE,  
SUITE 140  
TUCSON, AZ 85718  
TEL. 520.882.7623  
FAX. 520.882.7643

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MANCHESTER, NH 03101  
TEL. 603.668.1400  
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